

Name: KEY

Section 5.2a - Proficiency Check - Factoring Using the GCF and by Grouping

Factor out the Greatest Common Factor. Leave answers in descending order.

$3x^3 - 18x^2 + 9x$ <p>GCF is $3x$</p> $3x(x^2 - 6x + 3)$	$-4x^4y^3 + 8x^2y^5 - 16x^3y^4$ <p>GCF $-4x^2y^3$</p> $-4x^2y^3(x^2 - 2y^2 + 4xy)$
$3(x+1) - 4x(x+1) + x^2(x+1)$ <p>$(x+1)(3 - 4x + x^2)$ descending order $(x+1)(x^2 - 4x + 3)$</p>	$5x^2(y^2 - 3) - 2(y^2 - 3) + x(y^2 - 3)$ <p>$(y^2 - 3)(5x^2 + x - 2)$ I put it in descending order right away</p>

Factor by Grouping, leave answers in descending order.

$(x^3 + x^2)(x + 3)$ $x^2(x+1) + 3(x+1)$ $(x+1)(x^2 + 3)$	$x - 6x^2 + 2x^3 - 3$ <p>Rearrange</p> $(2x^3 - 6x^2)(x - 3)$ $2x^2(x - 3) + 1(x - 3)$ $(2x^2 + 1)(x - 3)$
$(5y^3 - y^2)(5y + 1)$ $y^2(5y - 1) - 1(5y - 1)$ $(y^2 - 1)(5y - 1)$	$(6x^3 - 2x^2)(3x - 1)$ $2x^2(3x - 1) + 3(3x - 1)$ $(3x - 1)(2x^2 + 3)$